

Title (en)
DUAL EXPRESSION VECTOR SYSTEM FOR ANTIBODY EXPRESSION IN BACTERIAL AND MAMMALIAN CELLS

Title (de)
DOPPEL-EXPRESSIONSVEKTORSYSTEM FÜR DIE ANTIKÖRPER-EXPRESSION IN BAKTERIELLEN UND SÄUGETIERZELLEN

Title (fr)
SYSTEME VECTORIEL A DOUBLE EXPRESSION SERVANT A EXPRIMER DES ANTICORPS DANS DES CELLULES BACTERIENNES ET MAMMIFERES

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Application
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Priority

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Abstract (en)
[origin: WO2004063343A2] The present invention provides a dual expression vector, and methods for its use, for the expression and secretion of a full-length polypeptide of interest in eukaryotic cells, and a soluble domain or fragment of the polypeptide in bacteria. When expressed in bacteria, transcription from a bacterial promoter within a first intron and termination at the stop codon in a second intron results in expression of a fragment of the polypeptide, e.g., a Fab fragment, whereas in mammalian cells, splicing removes the bacterial regulatory sequences located in the two introns and generates the mammalian signal sequence, allowing expression of the full-length polypeptide, e.g., IgG heavy or light chain polypeptide. The dual expression vector system of the invention can be used to select and screen for new monoclonal antibodies, as well as to optimize monoclonal antibodies for binding to antigenic molecules of interest.

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Citation (search report)

- [PA] US 2003224408 A1 20031204 - HOOGENBOOM HENRICUS RENERUS JA [NL], et al
- [A] BOEL E ET AL: "Functional human monoclonal antibodies of all isotypes constructed from phage display library-derived single-chain Fv antibody fragments", JOURNAL OF IMMUNOLOGICAL METHODS, ELSEVIER SCIENCE PUBLISHERS B.V.,AMSTERDAM, NL, vol. 239, no. 1-2, May 2000 (2000-05-01), pages 153 - 166, XP004204325, ISSN: 0022-1759
- [A] AMES R S ET AL: "Conversion of murine Fabs isolated from a combinatorial phage display library to full length immunoglobulins", JOURNAL OF IMMUNOLOGICAL METHODS, ELSEVIER SCIENCE PUBLISHERS B.V.,AMSTERDAM, NL, vol. 184, no. 2, 18 August 1995 (1995-08-18), pages 177 - 186, XP004020985, ISSN: 0022-1759
- [A] MIESCHER ET AL: "CHO expression of a novel humaqn recombinant Ig1 anti-RhD antibody isolated by phage display", BRITISH JOURNAL OF HAEMATOLOGY, OXFORD, GB, vol. 111, 2000, pages 157 - 166, XP002210939, ISSN: 0007-1048
- See references of WO 2004063343A2

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